IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:

Group Art Unit:

Inventors: Belov et al.

Filed:

Title:

High Selectivity Colloidal

Silica Slurry

Examiner:

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with 37 CFR 1.51, 1.56 and 1.97 to 1.99, the list of references cited on the attached Form PTO-1449 is made of record to assist the Patent and Trademark Office in its examination of this application. A copy of each of the references cited is enclosed herewith. Since we have not received an Office Action on the merits, no fee is believed to be due.

This disclosure statement should neither be construed as a representation that a search has been made, nor as an admission that the information cited is, or is considered to be, material to patentability as defined in 1.56(b).

Respectfully submitted,

Iurie A. Schwartz Attorney for Applicants Reg. No. 43,909

Praxair, Inc. 39 Old Ridgebury Road Danbury, CT 06810-5113 Phone: (203) 837-2115

Date: November 19, 2003

Form PTO-1449 U.S. Department of Commerce (Rev. 8-83									Atty. Docket No. D-21,389 Serial No.				
Info	ormat	ion	Disc	closi	ıre (Cita	tion	- 11	Applicants Belov et al.	<u></u>][
	(Use s	severa	ıl shee	ets if n	ecess	ary)			Filing Date		Group		
							U.S.	PATE	NT DOCUMENTS][
							_		·			Filing if Appr	
Examiner Initial			· · · · · ·		Numbe			Date	Name	Class	Subclass		
	4	5	2	5	6	3	1	6/1985	Allison	290	4		
	5	6	7	1	8	5	1	9/1997	Johnson et al.	211	51		
	5	7	3	8	8	0	0	4/1998	Hosali et al.	216	99		
	5	7	5	9	9	1	7	6/1998	Grover et al.	438	690		
	6	0	1	9	8	0	6	2/2000	Sees et al.	51	308		
	6	0	4	2	7	4	1	3/2000	Hosali et al.	252	79.1		
	6	1	1	4	2	4	9	9/2000	Canaperi et al.	438	692		
	6	1	3	2	6	3	7	10/2000	Hosali et al.	252	79.1		
	6	2	1	8	3	0	5	4/2001	Hosali et al.	438	691		
	6	2	3	8	4	9	4	5/2001	Segal	148	421		
	6	4	1	0	4	4	4	6/2002	Kido et al.	438	693		
						FO	REIC	GN PAT	TENT DOCUMENTS				
			Docu	ment]	Numbe	r		Date	Country Class Subclass			Translation Yes No	
							ļ						L
		-	-	-	}		 	,					
		-	-	-	_	 							
		<u>'</u>	ther	Doc	umer	ıts (i	nclud	ing Au	thor, Title, Date, Pertinent P	ages, Et	c.)		
		Coo	ok, "C	hemi	ical P	roces	ses in	Glass F	olishing", Journal of Non-Cry	stalline	Solids (19	90) pp	152-17
		Lo	et al,	"Cha	racte	rizati	on of	Selectiv	ve-CMP, Dummy Pattern and	Reverse	Mask Apr	oroache	s in S
		Plar	nariza	tion	Proce	ss", I	Proce	edings o	f 1999 CMP-MIC, pp-333-335	j			
		Lee et al., "The Effects of Slurries with Pattern Size and Step Height in Shallow Trench Isolation Chemical Mechanical Polishing", Proceedings of 2000 CMP-MIC, pp 288-290											
		Jin e	et al.,	"Ad	vance	d Fro	ont En	d CMP	and Integration Solutions", Pro	oceeding	s of 2000	CMP-N	⁄IIC, p
	Bonner et al., "Development of a Direct Polish Process for Shallow Trench Isolation Modules", Proceedings of 2001 CMP-MIC, pp. 572-579											lodules	··,
		11100											
Examiner					ction	to Se	emico	nductor	Manufacturing Technology",	Prentice-	Hall Inc. ((2001)	pp. 384

Form PTO-1449 U.S. Department of Commerce (Rev. 8-83									Atty. Docket No. D-21,389 Serial No.				
Info	rmat	ion]	Disc	:losu	ıre (Cita	tion	Ηv	applicants Belov et al.		<u> </u>		
	(Use s								iling Date		Group		
			- <u>-</u> -				U.S.	PATE	NT DOCUMENTS		-		
						.*	-					Filing D	
Examiner Initial			Docu	ment l	Numbe	er	1	Date	Name	Class	Subclass		
imital	6	4 3 6 8 3 5					5	8/2002	Kido et al.	438	693		
	6	4	4	3	8	1	1	9/2002	Nojo et al.	451	41		
	6	4	7	1	7	3	5	10/2002	Misra et al.	51	308		
	0	1	4	2	6	0	0	10/2002	Jacquinot et al.	438	690		
	0	1	9	5	4	2	1	12/2002	Srinivasan et al.*	216	38		
	0	0	0	6	3	9	7	1/2003	Srinivasan et al.¥	252	79.1		
	6	5	4	4	8	9	2	4/2003	Srinivasan et al.	438	692	-	
	0	1	7	1	0	7	2	9/2003	Ward et al. *	451	28		
				,		FO	REI	GN PAT	TENT DOCUMENTS				-
			Docu	ment N	Numbe	r		Date	Country	Class	Subclass	Transl:	ation No
		8	4	6	7	4	0	6/1988	EP				
	_1	<u> </u>			<u> </u>	<u> </u>	<u></u>						
		C	Other	Doc	umer	nts (i	nclud	ling Au	thor, Title, Date, Pertinent	Pages, Et	c.)		
		Zha	o et a	l, "D	irect	СМР	for S	TI", Ser	niconductor International (20	001) pp. 14	15-150	·····	
									STI CMP Process with High				
		Microscratching & Increased Productivity", Proceedings of 2002 CMP-MIC, pp 247-254 Garliardi et al, "Fixed Abrasives and Selective Chemistries:Some Real Advantages for Direct STI											
	+	CM	P", P	rocee	dings	of 2	002 C	CMP-MI	C, pp 288-290 High – Selectivity Slurry", Pr				
		255	-259							•			•••
		Led	uc et	al, "C	CMP:	Aimi	ng fo	Perfect	Planarization", Proceedings	of 2002 C	MP-MIC,	pp 239-2	246
			riend P-MI				iges f	or the In	tegration of Shallow Trench	Isolation"	, Proceedi	ngs of 20	03
Examiner									Date Considered				

Form PTO-1449 U.S. Department of Commerce (Rev. 8-83									rce	Atty. Docket No. D-21,389 Serial No.								
Information Disclosure Citation										Applicants Belov et al.								
(Use several sheets if necessary)											iling Date		Group					
								U.S.	PATI	EN	ENT DOCUMENTS							
												-		Filing if Appro				
Examiner Initial		Document Number Date								e	Name	Class	Subclass					
														<u></u>				
			-															
									· · · · · · · · · · · · · · · · · · ·									
						-												
							FO	REIC	IN PA	ĄΤ	ENT DOCUMENTS							
Document Number Date									Date	;	Country	Class	Subclass	Tran: Yes	slation No			
		-																
													:					
Other Documents (including Author, Title, Date, Pertinent Pages, Etc.)																		
]									s of STI CMP", Nanochip Techr			2003) p	p. 42-45			
]	Lampara et al., "A High Oxide – Nitride Selectivity CMP Slurry for Shallow Trench Isolation", Electrochemical Society Proceedings, Vol. 98-7, pp 218-234												,			
	_								·									
Examiner											Date Considered							
* EXAMINI	ER: In	itial if	citatio	on cor	sidere	ed, who	ether of	or not o	itation	isi	n conformance with MPEP 609; Draw	line thro	ough citation	if not in				